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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 246,918	02/09/1999	KARL M. ROBINSON	303 455US2	6845

7590 12/17/2001

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EXAMINER

FOURSON III, GEORGE R

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 12/17/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/246,918	ROBINSON, KARL M.	
	Examiner	Art Unit	
	George Fourson	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 10-18 and 29-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 10-18, 29-33, 37 and 38 is/are rejected.
- 7) ☐ Claim(s) 34-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3, 8, 9</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Claims 2-4 and 50-52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. . There is no description of formation of a capacitor dielectric by methods other than oxidizing a metal layer or of forming a capacitor in only 2 deposition steps.

See 1242 OG 172 .

Claims 2-4 and 50-52 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for formation of a capacitor dielectric by oxidizing a metal layer, does not reasonably provide enablement for recitation of forming the capacitor dielectric "from" the metal layer broadly or for recitation of forming a capacitor in only 2 deposition steps broadly. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. There is no description of such processes as discussed above and therefore no guidance to enable one of ordinary skill in the art to perform such processes.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6, 10 and 11 rejected under 35 U.S.C. 102(b) as being anticipated by Gaulier.

Gaulier discloses formation of Al capacitor electrode 5b, anodization to form capacitor dielectric 9 by oxidizing 5b and deposition of Al capacitor electrode 13b.

Claims 12-16, 29-33, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaulier as applied to claims 2-6, 10 and 11 above, and further in view of the following comments.

Gaulier does not disclose forming the capacitor on a conductive polysilicon layer. The examiner takes official notice that formation of capacitor structures on polysilicon plugs connected to source/drain structures to form DRAM devices was known prior to applicant's invention. It would have been within the scope of one of ordinary skill in the art to combine the known process with that of Gaulier to enable DRAM formation.

4. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaulier as applied to claims 12-16, 29-33, 37 and 38 above, and further in view of Dickey et al.

Gaulier does not disclose adjusting the current during the anodization process. Dickey et al discloses anodization of Al with process control used to adjust the anodization current to achieve desired electrical characteristics. It would have been within the scope of one of ordinary skill in the

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art to combine the teachings of Gaulier and Dickey et al to enable achievement of particular desired properties of the anodic oxide of Gaulier.

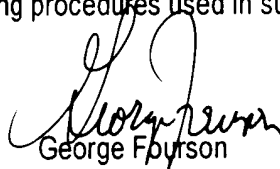
5. Claims 34-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. See MPEP 203.08.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner George Fourson whose telephone number is (703) 308-2544. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax number for this group is (703)308-7722(7724,3431 and 3432). MPEP 502.01 contains instructions regarding procedures used in submitting responses by facsimile transmission.


George Fourson
Primary Examiner
Art Unit 2823

GFourson
December 3, 2001